

FURTHER RECORDS OF THE PITTED-SHELLED TURTLE (*CARETTOCHELYS INSCULPTA*) FROM AUSTRALIA

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Summary

Further records of the Pitted-shelled Turtle, *Carettochelys insculpta*, including the first breeding record, are reported from northern Australia. It is concluded that the species occurs in river systems right around the landward margins of the Sahul Shelf. The stone fruits of *Pandanus*, whenever they are available, appear to comprise an important item of the turtle's diet.

The Pitted-shelled Turtle¹, *Carettochelys insculpta* Ramsay, sole living species of a family, Carettochelyidae, that apparently occurred widely in palaeartic and nearctic regions up until early Tertiary times, was known only from the river systems of southern New Guinea until 1969 (de Rooij 1915, 1922; Wermuth & Mertens 1961). In that year, the first specimens were recorded for Australia (Cogger 1970). Ten specimens were captured, all in the Daly River, Northern Territory, in freshwater reaches about 13 km above tidal influence. Because the single specimen examined did not appear to differ significantly from New Guinean specimens, and no evidence of breeding was found, Cogger (l.c.) speculated on whether or not the Daly River turtles represented merely a non-breeding outlier of a parent Papuan population. All specimens were relatively small, ranging in carapace length from about 26 to 38 cm. It was also determined from faeces that food ingested by one of them comprised figs and freshwater snails.

A second verified record now comes from the South Alligator River system, approximately 400 km east of the Daly River site. There, in Yellow Waters billabong on Jim Jim Creek, a single female (CSIRO R. No. 320) was caught by a CSIRO fauna survey team on 5 November 1971. The specimen (Fig. 1), deposited in the museum of CSIRO's Division of Wildlife Research, Canberra, is large, having a carapace length of 45.6 cm. This compares with ca 48–50.5 cm for the largest New Guinea specimens (Walther 1922; Schultze-Westrum 1963). Other dimensions, taken from life, are: carapace breadth (includ-

ing marginals) 36.5 cm; total height (carapace + plastron) 14.8 cm; head length (to base of crown) 15 cm; head width 8.1 cm; head + neck length (to gular shields of plastron) 18.5 cm; fore-limb length (posterior margin of flipper) 26.4 cm; hind-limb length (anterior margin of flipper) 25.3 cm; tail (to base of anal shields of plastron) 16.9 cm long, with 12 or 13 dorsal scute bands. Soft part colours: shell, limbs, head and tail, mid to dark olive-brown dorsally, grading to cream ventrally (fleshy cream on plastron); iris mid blue-green-grey. Except for the reduced number of caudal scutes, quoted at 14–16 for New Guinean specimens by de Rooij (1915), the South Alligator specimen appears to be identical with New Guinean forms.

The condition of the reproductive tracts showed the female to be in the process of laying: a large number of enlarged megalecithal ova were present in the ovaries (Fig. 2). Many follicles also appeared to have ruptured recently, and both oviducts were markedly swollen. The large unshed ova were almost the size of shelled eggs according to the dimensions for the latter illustrated by de Rooij (1915, fig. 102). Because Yellow Waters billabong, ca 30 km up stream above tidal influence on the South Alligator system, had been landlocked between April and November during the monsoonal dry season, there can be no doubt that eggs had been deposited somewhere along the billabong. This represents the first evidence that the species breeds in Australia.

While kept alive for a time in water, the turtle defaecated large quantities of partly digested husks of the stone fruits of *Pandanus*, as well as a few shoot leaves (*Melaleuca* and

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¹ Known locally in the Northern Territory by the appropriate vernacular of "pig-nosed turtle" (J. Cann. pers. comm.).



Fig. 1. The Pitted-shelled Turtle, *Carettochelys insculpta* (CSIRO specimen R. No. 320).

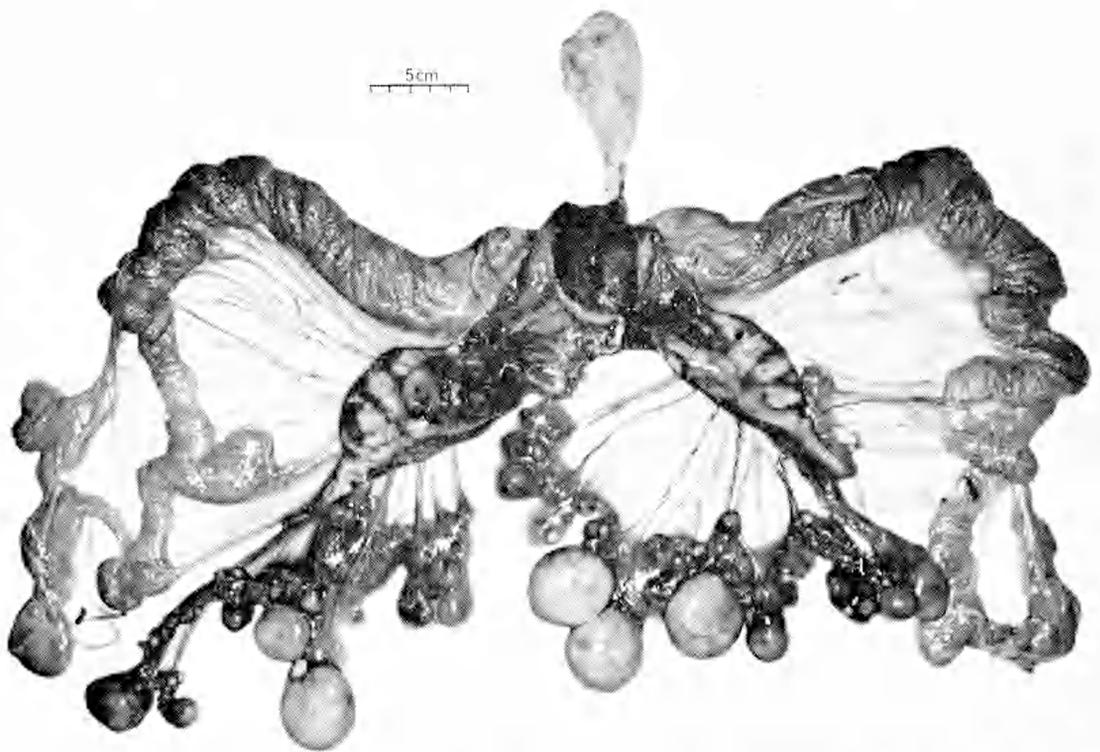


Fig. 2. Reproductive tract of ovulating *Carettochelys insculpta* (CSIRO specimen R. No. 320).

Leguminosae spp.), seeds, roots, pieces of aerenchymatous plant stem, and traces of animal matter. The animal matter, comprising ca 1% of the defaecated material, included freshwater snails (Thiaridae sp.), water-boatmen (Corixidae sp.), the water beetles *Homeodytes scutellaris* Germ. (Dytiscidae) and *Hydrophilus latipalpus* Cast. (Hydrophilidae), and ants (*Iridomyrmex* sp.). Upon dissection, the colon and lower intestine of the turtle were found to be packed with *Pandanus* fruit husks. Perianth segments remained attached to many of the husks, indicating that the turtle had presumably broken and eaten hard, green, fruiting cones with its jaws—no mean feat. T. G. Schultze-Westrum (pers. comm.) has also observed the species feeding on pandan fruit in New Guinea. Thus, although turtles have proved to be somewhat omnivorous (Schultze-Westrum 1963; Cogger 1970; J. Cann, pers. comm.), the fruits of *Pandanus*, whenever falling from trees of the various species of the genus that commonly line and overhang the estuarine and lower freshwater reaches of rivers in both southern New Guinea and northern Australia, would appear to constitute a rather significant item of their diet.

There have been numerous other records of "freshwater turtles" in northern Australian rivers in recent years (cf. Cogger 1970) and, though in one case unsupported by specimens, at least two appear to be of authentic *Carettochelys insculpta*. One is of specimens examined by J. Cann (pers. comm.) from the upper reaches of the Daly River about 140 km above tidal influence in the Northern Territory. A carapace of one of the specimens has been placed in the Australian Museum, Sydney

(Reg. No. R.31717). The other, published incidentally by St. John (1967, p. 527) and Parker (1971), is of observations made by the late A. de Lestang who observed "herds of turtles" devouring the fallen fruits of *Pandanus* (*P. delestangii* St. John) in perennial rivers south-west of Burketown in north-western Queensland and/or eastern Northern Territory. As all other freshwater chelonians in the region are carnivorous, it seems probable that de Lestang's observations refer to *Carettochelys*.

These records suggest that the Pitted-shelled Turtle occurs in the lower (to upper) reaches of major river systems across northern Australia, at least from the Victoria River District of the Northern Territory to as far east as the Gulf country of Queensland and perhaps western Cape York Peninsula. From local information, J. Cann (pers. comm.) believes the turtle to be rather common in most coastal rivers flowing into the Joseph Bonaparte and Van Diemen Gulfs. In overall distribution, then, the species apparently occurs in river systems along the landward margins of the Sahul Shelf. Little is yet known of its occurrence or movements in the intervening Arafura Sea.

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